



PAN AMERICAN HEALTH ORGANIZATION
WORLD HEALTH ORGANIZATION



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**PROPOSED ACTION PLAN FOR THE
PAN AMERICAN FOOT-AND-MOUTH DISEASE
CENTER (PANAFTOSA), 2002–2003**

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1. Background

1.1 *Institutional*

The Pan American Foot-and-Mouth Disease Center (PANAFTOSA) is an integral part of the Program on Veterinary Public Health of the Pan American Health Organization (PAHO) under the Division of Disease Prevention and Control (HCP).

PANAFTOSA was created in 1950 as a project of the Organization of American States (OAS) to assist countries in combating foot-and-mouth disease. In 1968 it became a regular component of the technical cooperation provided by the Program on Veterinary Public Health of the Pan American Health Organization/World Health Organization (HCV/PAHO/WHO).

PANAFTOSA is recognized by the International Office of Epizootics (IOE) and the Food and Agriculture Organization of the United Nations (FAO) as a reference center for the Americas for vesicular diseases.

Since May 1998, by mandate of the Governing Bodies of PAHO/WHO, PANAFTOSA has provided technical cooperation on zoonoses with an impact on human health and the economies of the countries.

In its vision it is defined as the Regional Agency for the Americas that serves as the guarantor of the epidemiological situation of vesicular diseases and zoonoses, a reference center for laboratory and field work for the aforementioned animal diseases with a high degree of scientific and technical specialization in its articulation with the countries.

Its mission is geared to:

- Contributing to the comprehensive application of the Hemispheric Program for the Eradication of Foot-and-mouth Disease and cooperating with the countries of the Region in the organization, implementation, and strengthening of national and regional programs for the prevention, control, and eradication of the disease.
- Cooperating with the countries of the Hemisphere in developing and strengthening programs for the control and elimination of zoonoses that impact on human health and livestock production.

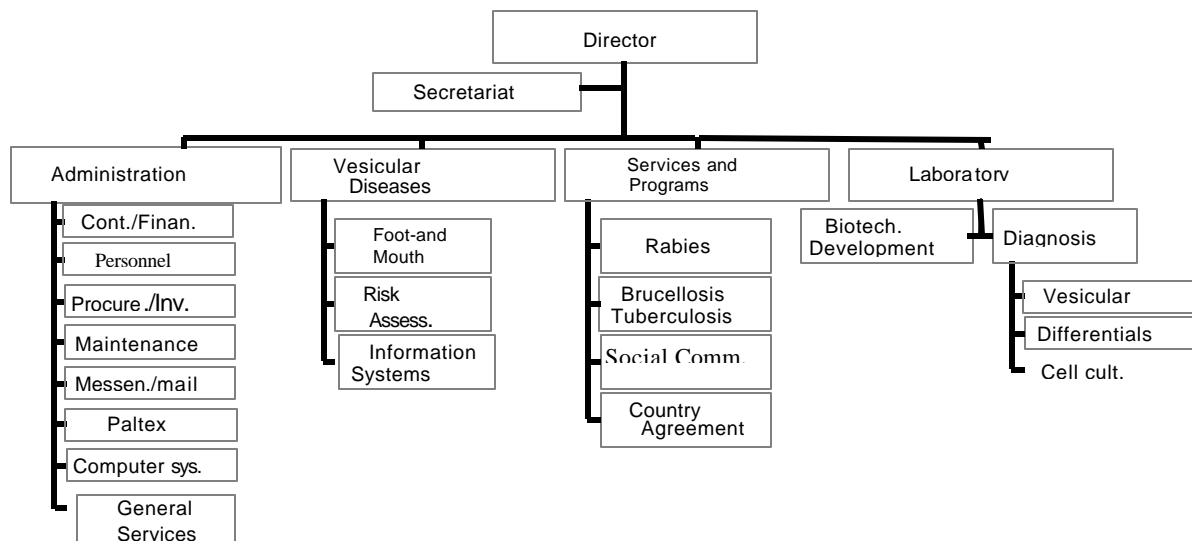
1.2 *Political and Strategic*

Since the 1980s PANAFTOSA has been involved in the implementation of the Hemispheric Program for the Eradication of Foot-and-mouth Disease (PHEFA) and has been its principal promoter. It has been working in the field of zoonoses since May 1998, promoting the implementation of the Program for the Elimination of Urban Rabies in the Americas and the prevention and control of other zoonoses with a regional impact on human health and the livestock economy, such as brucellosis and tuberculosis. The prevention and mitigation of emerging and reemerging zoonoses, which in some cases have appeared in the wake of natural disasters, constitute another functional referent for PANAFTOSA technical cooperation.

The regional cooperation programs were created by the integration of several subregional projects and bi- or multinational border agreements and are grounded in the principles of equity, Pan-Americanism, and regionalization. They articulate with the supranational coordinating bodies for policy-making: the Inter-American Meeting, at the Ministerial Level, on Health and Agriculture (RIMSA), the Hemispheric Commission for the Eradication of Foot-and-Mouth Disease (COHEFA), the South American Commission for the Control of Foot-and-Mouth Disease (COSALFA), and the Meeting of Directors of Rabies Control Programs (REDIPRA), and maintain interagency cooperation links with FAO, IICA, IOE, APHIS/USDA, USDA, CARICOM, OIRSA, the World Reference Laboratory for Foot-and-mouth Disease, several nongovernmental organizations, and international financial cooperation agencies such as the IDB and the World Bank.

1.3 *Organizational Structure*

The structure of PANAFTOSA includes the Office of the Director and four Technical Units: Administration, Programs and Services, Foot-and-mouth Disease, and Laboratories.



PANAFTOSA is located in the city of Duque de Caxias, State of Rio de Janeiro, Brazil and has 100 staff members, as observed below.

Type and Number of Personnel	
<i>United Nations</i>	
<i>International staff</i>	14
<i>International staff stationed in Panama</i>	1
<i>National officer</i>	1
<i>General Services</i>	21
Subtotal	37
<i>Local</i>	
<i>National professionals</i>	9
<i>Local personnel (CLT)</i>	54
Subtotal	63
TOTAL	100

At the end of 2000, the Director of PAHO/WHO ratified the current headquarters of PANAFTOSA.

2. Program Components

In its proposed technical cooperation plan for the biennium 2002-2003, PANAFTOSA has taken the mandates of the Governing Bodies and the Strategic and Programmatic Orientations into account, organizing the plan around four projects: Management, Foot-and-mouth Disease, Zoonoses, and Reference Laboratories. The Zoonoses project includes three subprojects: Rabies, Brucellosis/Tuberculosis, and Emerging and Reemerging Zoonoses.

2.1 Project on Management

2.1.1 Situation Analysis

Within the framework of the orientations of the Pan American Health Organization (PAHO) and its Division of Disease Prevention and Control, the management of PANAFTOSA's technical cooperation is carried out in the execution of the mandates issued by the Inter-American Meeting, at the Ministerial Level, on Health and Agriculture (RIMSA), the Hemispheric Commission for the Eradication of Foot-and-mouth Disease (COHEFA), the South American Commission on Foot-and-mouth Disease (COSALFA), the Meeting of Directors of Rabies Control Programs (REDIPRA), and the provisions of the subregional agreements (River Plate Basin, Andean Area, Amazon Basin, and Commission of Countries Free of Foot-and-mouth Disease) and the international sanitary agreements for border areas.

These mandates stem from the challenges posed by the need to address the new epidemiological disease profiles resulting from the actions of the health services and the dynamic of political, social, economic, and cultural determinants. This new situation demands the systematic review and strengthening of the existing regional and subregional cooperation programs and agreements to procure greater efficiency in cooperation goals and objectives, which have been intimately linked to two basic facts: interference in the technical and administrative restructuring of PANAFTOSA, and the limitations, deterioration, and disappearance in some cases, and recovery in others, of the official animal health structures in the countries, particularly those related to epidemiological surveillance and prevention.

Improvements in the quality of the services, which have been substantial in some cases, are determined by the quality of the human resources in the veterinary services. The latest hemispheric effort in this area dates back to the late 1970s, when PANAFTOSA managed, with international financial cooperation, to train the personnel involved in the execution of the national projects for foot-and-mouth disease. Since the 1980s, and particularly since the 1990s, training efforts and resources have been limited and unsystematic. This, added to the high turnover of professional staff in the countries' health services, makes it indispensable to carry out initiatives in human resources education, applied to the execution of the various technical components of the sanitary programs. This training process will also permit the dissemination and transfer of the applied technology generated and/or adapted by PANAFTOSA.

The main emphasis in cooperation is related to communication and social participation, aimed at promoting the professional use of adequate communication tools in the countries, employing an interdisciplinary approach that meets the needs of the particular social environment and underscores the benefits and advantages of the health programs. This will make it possible to overcome programming and budgetary constraints in their execution, bearing in mind that knowledge and information are public goods essential for improving living conditions, promoting health, preserving the environment, and supporting public health policies.

2.1.2 *Objective*

This involves two basic activities:

- Development and implementation of a modern, efficient administrative and financial management model that facilitates and makes feasible the execution of PANAFTOSA's technical cooperation.

- Promotion of a technical management model based on the use of tools for strategic planning and administration, the mobilization and exchange of resources among countries, and social participation in the technical cooperation process.

2.1.3 *Expected results*

- Maintain the efficient operation of PANAFTOSA, in keeping with the demand for technical cooperation projects, employing the human, budgetary, and logistical resources as indicated in the work strategies.
- Administer the staff development and performance process at the Center to ensure a functional organization that will permit full attainment of the objectives and goals of PANAFTOSA's technical cooperation programs.
- Formulate and implement regional, subregional, and international border agreements and programs for technical cooperation.
- Contribute to an improvement of the organizational-functional structure of veterinary services in the countries for the execution of programs for the control and eradication of foot-and-mouth disease and zoonoses of social and economic importance, through technical cooperation and consultative meetings on quality control.
- Contribute to the training of human resources in the official zoonosis and animal health programs at the regional and subregional level through the formulation, development, and execution of a training plan consistent with program needs.
- Implement the methodology for the programming, monitoring, and evaluation of PANAFTOSA's technical cooperation projects.
- Maintain and strengthen the integration of PANAFTOSA with national and international organizations and cooperation agencies.
- Develop a communication and technical information system, adhering to technical standards, in order to disseminate information on animal health and zoonoses to the countries.
- Strategically manage the regional programs for technical cooperation in animal health and zoonoses, based on the principles of regionalization, decentralization, and social participation.

- Revitalize the mission of PANAFTOSA by seeking and entering into partnerships with other international technical cooperation agencies and organizations.

2.2 Project for the Eradication of Foot-and-Mouth Disease

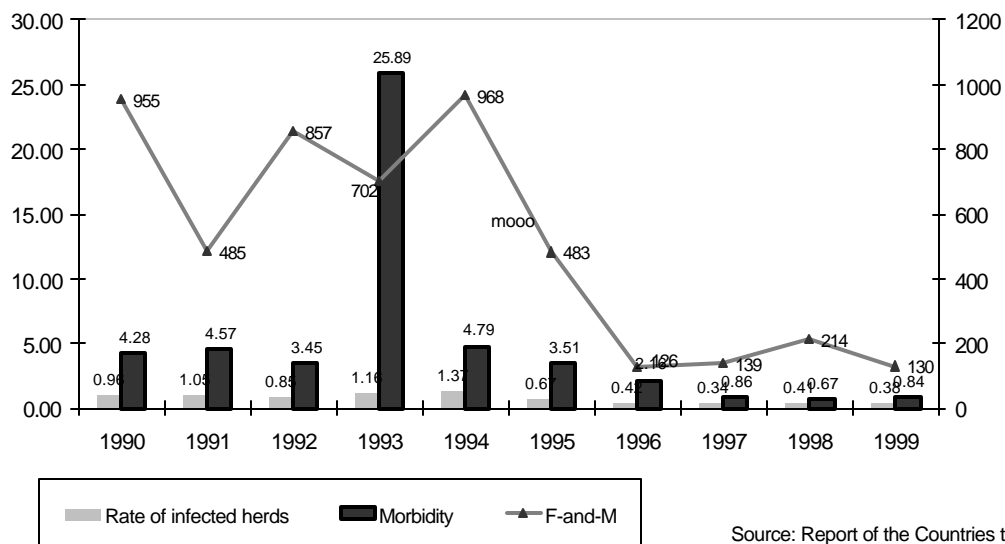
2.2.1 Situation analysis

Within the context of the Hemispheric Program for the Eradication of Foot-and-mouth Disease (PHEFA), the countries of North America, Central America, and the Caribbean, as well as Chile and Uruguay in South America, have managed to maintain their status as disease-free without vaccination.

The successes within the framework of the Hemispheric Program for the eradication of the disease have been maintained and expanded. Argentina obtained its certification as a country free of foot-and-mouth disease without vaccination, and an extensive area in the southern, central western, and eastern part Brazil has been certified as free with vaccination. Guyana has achieved its certification as disease-free area without vaccination, and Colombia is in the process of obtaining certification as a disease-free area with vaccination for the zones located in the departments along the Atlantic coast.

At the same time, the number of infected herds and the morbidity in the regions where the disease is present continue to fall (Figure 1).

Figure 1. Rate of infected herds (per 1,000), morbidity (per 10,000) from vesicular disease, and number of foot-and-mouth disease foci South America, 1990-1999



Source: Report of the Countries to COSALFA

This progress was momentarily compromised by the detection of seropositive animals in Argentina and the confirmation and eradication of foci in Uruguay, the State of Rio Grande do Sul in Brazil, and in the Atlantic coast of Colombia. In all cases, the countries' emergency operations eradicated the outbreaks, and they have managed to recover their respective international certification as countries and areas free of foot-and-mouth disease. By the end of the year 2000, clinical presence of the disease had not been reported for more than two years in almost 73% of the Hemisphere's cattle herds.

The experience gained from the sanitary emergencies reveals the need to review the hemispheric program for eradication, orienting it toward a preventive approach and strengthening international relations, coordination, and cooperation. To this end, III Special Meeting of COSALFA was convened. PANAFTOSA was assigned new functions as external auditor of the sanitary activities of the national programs, high priority was given to cooperation among countries and joint action in border areas.

In coordination with APHIS/USDA, continued support is being provided for the implementation of some area components, particularly the Andean Subregional Project, considered epidemiologically critical for that subregion and the other South American subregions, and components related to the implementation of the Program for the Eradication of Foot-and-mouth Disease in Beni/Bolivia and the improvement of epidemiological surveillance, sanitary control of animal traffic, the farm census, and the identification of animals in international border areas.

As progress is made in eradicating foot-and-mouth disease in the Hemisphere, PANAFTOSA is seeking to strengthen its epidemiological surveillance systems, deal with sanitary emergencies, and undertake risk assessment in order to guarantee the maintenance and expansion of disease-free regions, countries, and areas.

2.2.2 *Objective*

The basic emphasis is on the following lines of action:

- Cooperation with the countries, particularly those of the Andean Area, in the implementation of the subregional project, consistent with the target of eradicating foot-and-mouth disease in South America by the year 2009.
- Cooperation in the execution of programs for prevention and sanitary emergencies in disease-free countries and areas: Argentina, Brazil (Central western states, and the States of Rio Grande do Sul and Santa Catarina), Colombia (Atlantic coast), Chile, Paraguay, and Uruguay.

- Cooperation to prevent the reintroduction of the disease in North America, Central America, and the Caribbean.

2.2.3 *Expected results*

With the cooperation of PANAFTOSA the countries will have:

- Maintained and expanded their status as free of foot-and-mouth disease (countries and areas linked to the River Plate Basin and Southern Cone agreements).
- Designed and conducted seroepidemiological research to demonstrate absence of foot-and-mouth disease viral activity and requested international certification from the IOE.
- Audited sanitary emergencies connected with foot-and-mouth disease in the countries and evaluated the primary and secondary prevention structures in disease-free countries and/or regions.
- Increased the supply of training programs to deal with foci of foot-and-mouth disease and sanitary emergencies with a regional or multinational impact.
- Transferred laboratory methods and techniques for demonstrating and certifying the absence of viral activity to countries that have areas with a clinical absence of foot-and-mouth disease.
- Promoted networks of cooperation among countries, strengthening interregional programs for the prevention or eradication of foot-and-mouth disease.
- Reviewed and strengthened the structure and operations of the national and regional epidemiological surveillance and information systems.
- Organized regional and subregional training events applicable to the operation of the epidemiological surveillance and information systems.
- Participated in the drafting and implementation of the resolutions issued by the regular and special meetings of COSALFA, COHEFA, and RIMSA.

2.3 *Project for the Prevention, Control, and Elimination of Zoonoses*

This programming component seeks, in coordination with the Program on Veterinary Public Health, to cooperate with the countries in the execution of health policies geared to the elimination and/or eradication of zoonotic diseases, including emerging and reemerging diseases with an impact on health and the local, national, or regional economy.

2.3.1 *Subproject for the elimination of urban rabies*

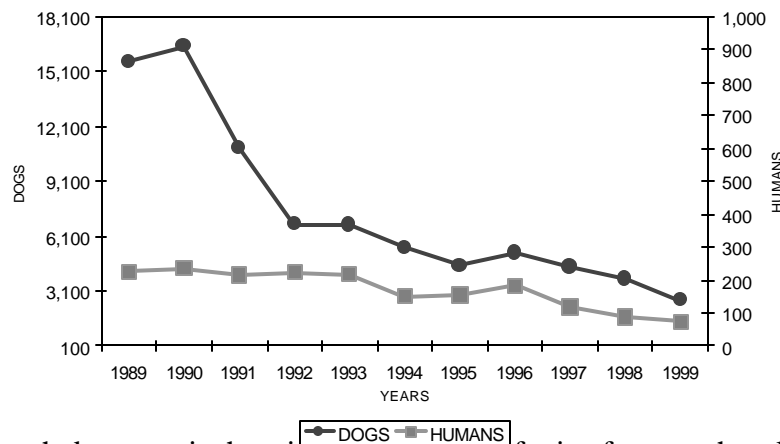
a) Situation analysis

Dogs remain the principal transmitters of rabies to humans in the Americas, despite the great strides made as a result of the hemispheric plans, regional strategies, and country efforts to control the disease.

During the decade 1989–1999, the countries of the Region achieved a significant reduction in the number of cases of human and canine rabies, thereby moving toward the goal of eliminating cases of rabies transmitted by dogs.

Human rabies cases fell by 71% during the period, from 255 cases in 1989 to 73 in 1999. The trend for canine rabies is similar; the 2,620 cases recorded in 1999 represent an 83% reduction over the 15,610 reported in 1989. These trends persisted during the year 2000; the data provided by the countries to the Regional Information System for Epidemiological Surveillance of Rabies, to December 2000, show reductions on the order of 64% over 1999 for human rabies cases and 44% for canine rabies cases (Figure 2).

Figure 2. Human and canine rabies in the Americas, 1989 - 1999



Although dogs remain the principal source of infection for man, the relative importance of rabies transmitted by wild animals, especially bats, is increasing. During 1999, 21.8% of human rabies cases where the transmitting species was known occurred from exposure to rabid bats. This figure represents a 16.6% increase over the figures for 1989, when bats were responsible for 18.7% of human rabies cases.

In October 2000 the VIII Meeting of Directors of National Rabies Control Programs of the Americas was held to analyze the progress of the regional strategic plan for the elimination of human rabies transmitted by dogs in Latin America, assess the current status of the various components of the regional plan of action, and define the technical cooperation strategies and activities to formulate the plan of operations for the biennium 2002-2003.

Among the most important cooperation mandates emanating from the aforementioned Meeting are the activities related to post-exposure rabies prophylaxis, the administration of hyperimmune antirabies serum, and the washing and disinfection of bite wounds, given that in many Latin American countries, exposed people—especially those who use the public health services—do not have access to the serum. In addition, the types of vaccines utilized and the treatment regimes employed are often not those recommended by PAHO/WHO, and medical care is frequently offered only in specialized centers, which means that at times, exposed people do not receive early care due to their limited access to the services.

From 18 to 19 October 1999, the Technical Advisory Meeting on the Use of Monoclonal Antibodies for the Characterization and Epidemiological Monitoring of the Rabies Virus in Latin America and the Caribbean was held in Washington, D.C. Its recommendations will be very useful for cooperation in the final stage of elimination of rabies transmitted by dogs and for strengthening the strategies for epidemiological monitoring and control of sylvatic rabies.

b) Objective

- Cooperation with the countries in the execution of the Program for the Elimination of Rabies Transmitted by Dogs in the Americas and in the surveillance and control of sylvatic rabies.

c) Expected results

With the cooperation of PANAFTOSA and HCV/PAHO the countries will have:

- Reduced, to an incidence rate of less than 0.013 per 10,000 population, human rabies transmitted by dogs in Bolivia, Brazil, Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Paraguay, Peru, and Venezuela.

- Strengthened primary prevention strategies for the maintenance and expansion of areas and countries without registries of clinical cases of rabies transmitted by dogs.
- Improved the quality, access, and coverage of medical care to the people exposed to the rabies virus and the quality of rabies prophylaxis in the countries of the Region.
- Reviewed and strengthened the national and hemispheric information and epidemiological surveillance systems for rabies (SIRVERA).
- Organized the network of reference laboratories for rabies diagnosis to improve the quality of diagnosis and quality control of rabies vaccines.
- Promoted and participated in the evaluation of the quality of management in rabies programs in the countries of the Region and in the definition of alternative proposals for their improvement.
- Participated in the organization of REDIPRA and other regional forums in order to maintain the political will of the Governing Bodies of PAHO and the country's governments to promote rabies control.
- Collaborated with the countries in the development and application of methods for improving rabies surveillance in wild species, especially in those that pose the greatest risk to human beings.

2.3.2 *Subproject for the prevention of brucellosis and tuberculosis*

a) Situation analysis

In 1999, PANAFTOSA coordinated a survey with 24 countries of the Region to determine the status of the programs for epidemiological surveillance and control and for declaring properties and areas free of brucellosis and tuberculosis, as well as recording cases in reservoirs and people during the period 1994-1998. The situational diagnosis was complemented with data from the country reports to the expert meetings of PAHO/WHO in Santiago, Chile 1999 and in Lima, Peru, in June 2000 (Map 1).

It was determined that 46% of the countries maintain national surveillance coverage; 37% have coverage only in very specific areas, and 17% have no coverage. Some 62% of the countries record cases on an ongoing basis and 21% only occasionally, which means that

knowledge about prevalence in the Region is incomplete, both in agriculture and the public health sector.

The situation is critical in the area endemic for *B. melitensis*, which includes the border zones of northwest Argentina and the El Chaco region of Paraguay and Bolivia, where cases in humans have been recorded for years and there is no epidemiological control of the animal reservoir nor surveillance of the species.

Women and children residing in these territories on the Argentine side, who subsist by raising goats, continually suffer from Malta fever. The infection rate in children under 14 is 56.7%. Despite this fact, some territories do not have mandatory reporting of the disease in reservoirs and people.

In Chile, cases of Malta fever are recorded only sporadically, and in Peru and Mexico, control of the reservoir has made it possible to lower the rising trend in human cases of previous years.

Since May 1998, when PANAFTOSA assumed the zoonosis cooperation functions, a guide has been published with recommendations and suggestions for care to people suffering from brucellosis and stressing the importance of social communication, actions in the animal reservoir, human resources training in endemic areas, and the strategy for achieving healthy borders free of caprine brucellosis and Malta fever.

An Expert Consultation on Brucellosis for the Analysis of Vaccines and Vaccination Programs against Brucellosis was held in Santiago, Chile. The results of this meeting, combined with the findings from the Survey on the Status of the Brucellosis and Tuberculosis (*M. bovis*) Programs in the Americas represent important inputs for PANAFTOSA technical cooperation, assisting in the definition of policies and strategies for the control and eradication of these zoonoses.

Although microbiological studies for the detection of *M. bovis* in tuberculosis patients are still rare, this agent was isolated in patients with pulmonary tuberculosis in Argentina, Chile, Mexico, Guyana, and Trinidad and Tobago. This confirms the need to continue supporting the countries in meeting their commitments for Phase 1 of the Regional Program for the Eradication of Bovine Tuberculosis.

b) Objective

- Formulation, in coordination with the countries, of a Regional Program for Technical Cooperation for the Control and Eradication of Brucellosis and Bovine Tuberculosis.

- Cooperation to the countries' health services in the formulation, implementation, and evaluation of national projects for the control and eradication of brucellosis.

c) Expected results

With the cooperation of PANAFTOSA and the Coordination of HCV, the countries will have:

- Designed, formalized, and launched the regional and national technical cooperation programs for the control and eradication of the Br/TB complex in cattle.
- Organized the regional network of reference laboratories for the diagnosis of brucellosis and tuberculosis.
- Designed and implemented surveillance systems and continuous recording of cases in the countries of the Region, facilitating activities for effective epidemiological control.
- Implemented and coordinated the operations of the hemispheric information system on brucellosis and tuberculosis.
- Formulated and launched projects with a local or multinational impact for the control and eradication of Malta fever, under the healthy spaces strategy.
- Established networks for cooperation among countries affected by *B. melitensis* (Argentina, Bolivia, Mexico, Paraguay, and Peru)
- Reviewed and updated the standards, regulations, and guidelines for the prevention, control, and eradication of brucellosis and tuberculosis.
- Trained human resources in surveillance and epidemiological control in at least 14 countries.

2.3.3 *Subproject for the prevention and control of emerging and reemerging zoonoses*

a) Situation analysis

Several zoonoses are emerging or reemerging in the countries of the Hemisphere, the majority of them associated with recent natural catastrophes (El Niño or Hurricane Mitch, for example), abrupt changes in the environment, such as the deforestation of the Amazon region or progressive urbanization and the lack of basic services for the population.

Epidemics of leptospirosis, equine encephalitides, plague, and hantavirus have had a serious health and economic impact in important regions and countries in the Hemisphere. To illustrate, in the last epidemic of Venezuelan equine encephalitis, which occurred on the border between Colombia and Venezuela in 1995, 27,000 people were stricken, with 43 deaths, and the death of over 6,000 horses was reported.

Currently, even though the Region of the Americas is free of bovine spongiform encephalitis (BSE), as a preventive strategy the countries are already imposing restrictions on the international trade of animals and animal products, with a grave economic impact on the countries and the Region. In light of this situation, the countries, through their health services, are faced with the imminent need to conduct field research that demonstrates the absence of the disease in order to protect their markets and guarantee consumer health.

b) Objective

It is proposed that PANAFTOSA, working with the Coordination of the Veterinary Public Health Program:

- Cooperate with the countries in risk assessment and the development of epidemiological surveillance systems for the prevention and timely control of emerging and reemerging zoonoses.

c) Expected results

With the cooperation of PANAFTOSA and the Coordination of HCV, the countries will have:

- Promoted and implemented immunohistochemical diagnostic techniques for epidemiological surveillance of BSE.
- Provided continuity for the hemispheric surveillance system and epidemiological control of equine encephalitides, in coordination with the WHO Collaborating Centers for arboviruses, the CDC and NAMRID.
- Reviewed and strengthened the program for the prevention and control of hydatidosis in the countries of the Southern Cone.

- Promoted local intervention methodologies for the control of taeniasis/cysticercosis.
- Continued cooperation in epidemiological surveillance and control of bubonic plague in enzootic areas.
- Disseminated scientific and technical information on important emerging and reemerging diseases in the Region.

2.4 Reference Laboratory Project

2.4.1 Situation analysis

The current epidemiological situation of foot-and-mouth disease in the Hemisphere, and South America in particular, make clear the need for updating the approaches to detection and characterization of the foot-and-mouth disease virus, adapting the diagnostic requirements to the regional epidemiological transition.

The diagnostic tools currently in use do not allow for rapid response and as a result, are not adequate for an emergency. Decision-making is hindered by the lack of a rapid diagnosis for the detection and, ultimately, the characterization of field strains of foot-and-mouth disease virus, and the lack of direct standardized methods to distinguish them from agents easily confused with foot-and-mouth disease. Sequencing techniques, the approaches to sequence analysis, and the databases of strains representing the last foci in South America are out-of-date.

A direct method for detecting subclinical infection with the foot-and-mouth disease virus and for guaranteeing that the virus is not introduced into disease-free areas is essential. The use of indirect methods for the detection of antibodies in order to infer subclinical activity, both to guarantee the security of areas with low prevalence or areas that are disease-free and to estimate the magnitude of a focus, is not fully consolidated, principally for hosts other than cattle.

It is equally necessary to have standards and guidelines in place to guarantee the quality of diagnoses. There are no regulations in place for establishing a program of good laboratory practices, nor procedures for internal and external quality control that would guarantee that the testing in the various laboratories is done correctly.

There is a need to consolidate the laboratory network for vesicular diseases and set up a laboratory network for the diagnosis of rabies and other zoonoses, such as brucellosis and tuberculosis.

Finally, the new technical cooperation functions assigned to PANAFTOSA, as well as the new operating conditions for the country health services, must be taken into account, adapting management and the technical, administrative, and financing structures to the current situation.

2.4.2 *Objective*

This is related to the following aspects:

- Strengthening of reference functions for the diagnosis of foot-and-mouth disease, vesicular stomatitis, and quality control of vaccines against foot-and-mouth disease for the Region of the Americas.
- Optimization of diagnostic reference capacity in the countries, including the new methodological approaches for characterization using monoclonal antibodies and molecular epidemiology in vesicular diseases, zoonoses, and emerging or reemerging diseases that impact on public health and/or the national economy.

2.4.3 *Expected results*

With the cooperation of PANAFTOSA and the Coordination of HCV, the countries will have:

- Defined the basic standards and guidelines for guaranteeing quality in the diagnosis of vesicular diseases, foot-and-mouth disease, and diseases easily confused with foot-and-mouth disease (DVB-IBR- Bluetongue).
- Advised the countries on the implementation of laboratory techniques for epidemiological surveillance of bovine spongiform encephalopathy.
- Organized cooperation networks involving academic groups and/or the private sector for the diagnosis of vesicular and zoonotic diseases and emerging or reemerging diseases with an impact on public health and/or the national economy.
- Developed internationally validated diagnostic tools for characterizing the epidemiological situation, risk, and endemicity.
- Developed methods, models, and technologies to improve the quality, effectiveness, and efficiency of diagnostic procedures and vaccine control, and others for their corresponding interpretation, for vesicular and zoonotic diseases.

- Supported national and regional programs for the control and eradication of foot-and-mouth disease and programs for the control of vesicular disease and other zoonoses through the production, standardization, and supply of reagents and direct technical assistance.
- Developed methods for estimating the quality and potency of immunogens for vesicular and zoonotic diseases.

3. Budget

The proposed budget for the biennium 2002–2003 is US\$ 11,223,077, \$2,044,164 (18%) of which corresponds to the extrabudgetary resources allocated by the countries for management and technical cooperation related to the International Sanitary Agreements. Of the balance equivalent to \$9,178,913 (82%), \$5,867,600 (64%) is earmarked to cover the cost of international staff, \$2,347,500 (26%) for national personnel, and \$963,813 (10%) for technical cooperation in animal health and zoonoses.

Financial Resources–2002-2003		
AAA, Personnel P		\$3,711,600
AAA, Personnel NO		\$168,000
AAA, Personnel GS		\$1,988,000
Regular local personnel FMD and ZNS-010/P		\$785,000
Local Personnel CLT- Ministry FMD-020		\$1,182,500
Personnel NP FMD - 10/P		\$380,000
Regular budget FMD and ZNS--010/P		\$963,813
Subtotal		\$ 9,178.913
FMD-020-Ministry		\$1,151,830
FMD-022-Entre Ríos/ARG		\$79,336
FMD-042-Sale of services		\$239,470
FMD-044- Technical Cooperation Fund /Peru		\$55,316
FMD - 071 1 74-Control of foot-and-mouth disease – Colombia		\$63,144
FMD - 161/2/3/6/7-Eradication of foot-and-mouth disease/River Plate Basin		\$427,806
FMD--168- Technical Cooperation /Paraguay		\$27,262
Subtotal		\$ 2,044,164
Total		\$11,223,077

Map 1
Situation in the Americas of *Brucella abortus*,
infected species and year of last report

